

# ASL NEWS & VIEWS

Information Services Division

A Newsletter Dedicated To Information Technology In The State Of Montana



MONTANA STATE LIBRARY  
1515 E. 5TH AVE.  
HELENA, MONTANA 59620



Agency  
Spotlight

## The Capitol Gets a Facelift!

The Montana State Capitol has served as the center of state government for the people of Montana for nearly 100 years. Today, the building is both a monument and a working office complex for elected officials. Unfortunately, this fine old building is operating beyond the capacity of its building systems, and the maintenance of the building has fallen far behind what is required to preserve the facility for future uses. A compilation of recent studies and surveys results in the undeniable conclusion that major renovation of this facility is necessary if the building is to continue to be used as it is today, and preserved for future generations of Montanans.

### Background

Construction of the original Capitol was begun in 1899, and what is today the center portion of the building was dedicated for use on July 4, 1902. Between 1909 and 1912, substantial, four story wings were added to the east and west ends of the original construction.

June 1996

Volume 13 No. 12

No major additions or renovations were undertaken in the building until the 1960's, when the central portion of the facility was completely gutted, earthquake mitigation installations were constructed, and a stair tower was added at the southwest rear entrance to the building. This "renovation" project fundamentally impacted the historic appearance of the building. The only other major renovation project in the building took place in the 1980's. This program provided additional seismic precautions, and added an elevator/stair tower at the southeast rear entrance.

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## Current Building Usage

The Capitol is currently a monument to the history of the State of Montana, and serves as host to Montanans and their visitors who are interested in this

rich heritage. In addition, the building houses the Montana State Legislature during biennial and special legislative sessions, and serves as the office complex for their staff year round. The offices of the Governor, Lieutenant Governor, Secretary of State, and the Superintendent of Public Instruction are also located in the Capitol. Each of these current uses provides unique challenges to the management and upkeep of the building.

As a monument to the history of Montana, the Capitol must be maintained in a clean and attractive condition that reflects the dignity of the facility. Installations and maintenance efforts must consider the historic nature of the building, and do little or nothing to detract from the original appearance. The upcoming Centennial Anniversary of the Capitol Building has sparked a renewed interest in the historic restoration of the facility, and the Capitol Restoration Commission is exploring ways to return historically significant portions of the building to their pre-1960 condition.

As the home of the Montana State Legislature, the Capitol must adequately house the legislature and its staff, provide safe and convenient access for citizens to participate in legislative deliberations, and allow for the quick and convenient exchange of information. Recent requests for technological access to public events and records create challenges the building's information systems are not capable of meeting.

As modern office space for year round

occupants, the Capitol must provide safe and adequate space for program delivery, provide the utilities (including power, voice, and data transmission) necessary to communicate in the information age, and do so in a way that is compatible with the historic nature of the building.

## Current Conditions

The state of the Capitol is one of serious deterioration and systems overload. Numerous studies and inspections confirm the need to undertake a systematic and comprehensive renovation effort which updates the utility systems in the building while maintaining and improving the historic appearance of the monument. The magnitude and complexity of the problem does not lend itself to piecemeal undertakings, and costs will sharply escalate if solutions are not integrated and phased in a sensible way.

### Capitol Stone Exterior/Building Envelope

It is easy to observe that the stone on the exterior of the Capitol is badly

deteriorated. All of the parties interested in the Capitol restoration agree that stabilizing the condition of

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## Additional IT Meeting Information

A "Directory of Information Technology Meetings" which contains additional Information Technology meeting information may be obtained from the Value Added Server (GUESTVTCINFO\MEETING.W60 or GUESTVTMGINFO\MEETING.W60), the State Bulletin Board System (Agency / Administration / Information Services / Files / Advisory Groups / MEETING.ZIP) or by calling ISD (444-2700)."

## Calendar of Events

### June 5:

- ITMG, 8:30-10:30, Metcalf 111

### June 6:

- Public Safety Communications, 1:00-3:30

### June 7:

- MOPUG, 1:00-4:00, Mitchell 13A & 13B

### June 13:

- Blue Ribbon Task Force, 10:00-3:00, Great Falls

### June 14:

- Blue Ribbon Task Force, 9:00-4:00, Great Falls

### June 18:

- SEC, 9:30-11:30, Mitchell 160 or DPHHS Auditorium (METNET)

### June 19:

- ISPG, 1:00-3:00, Montana State Library Conference Room 208

### June 23-28:

- GPS/GIS '96 Conference, Yellowstone National Park and Billings

### June 27

- Year 2000 Gartner Group Video Conference, 10:00-11:30, PHHS Auditorium

### July 3:

- ITMG, 8:30-10:30, Metcalf 111

### July 4:

- Independence Day Holiday

### July 5:

- MOPUG, 1:00-4:00, Mitchell 13A & 13B

### July 9:

- ITAC, 8:30-11:30, Metcalf 111

### July 11:

- Public Safety Communications, Great Falls

### July 17:

- ISPG, 1:00-3:00, Montana State Library Conference Room 208

the exterior sandstone on the building must be the first step in any restoration effort. Without a stable building envelope, other restoration efforts will be compromised. Costs to restore the Capitol stone are estimated to be in the neighborhood of \$3.1 million. Other repairs necessary to reestablish a sound building envelope include replacement of damaged roofs and replacement of windows throughout the building.

#### **Utilities and Telecommunications**

Utility and systems overloads in the building are causing concern. Electric wiring in the building does not meet building codes and generates electromagnetic fields higher than recommended levels. Computer wiring is being used beyond its capacity at the present time and does not allow for any future growth in computer applications or devices. Power surges and static frequently cause computing difficulties for building occupants, and the current infrastructure will not allow the occupants of this building to participate in the information sharing technology proposals being made for the rest of the campus and the state. Increasing requests from businesses and private citizens for access to government data activities cannot be accommodated. Lighting fixtures are inefficient. Lighting and mechanical systems in the Capitol have not been upgraded for energy conservation. A proposal for a mechanical upgrade and lighting retrofit project is being made. Installment costs of \$325,000 are estimated to generate approximately \$48,000 in annual energy savings. The sound system in the House chamber does not meet ADA standards and presents problems for broadcasting House events. Technology innovations involve the use of heat generating equipment which is often temperature sensitive. The problems of climate control in the Capitol will need to be analyzed. This project replaces antiquated equipment and provides individual climate control units in rooms in the Capitol for better temperature control. It

saves energy and creates a more pleasant environment. It creates and maintains a stable climate for the art works in the building. Cost estimates for this work are in the range of \$3 and \$4 million.

#### **Historic Priorities**

The Capitol Restoration Commission will be prioritizing the historic restoration projects in the Capitol and intends to make a significant impact on the historic appearance of the Capitol prior to the Centennial celebration of the Capitol Building in 2002. Following are some of the findings and recommendations of the commission. The scagliola columns throughout the building are cracked, stained, and in some cases being destroyed from lack of proper treatment. A proposal is being made to remove the committee room over the grand staircase and recreate the original barrel vault. Decorative paint and plaster repairs are being considered which would restore the rotunda and the first floor hallways to their original painted detail. Also included in plans are repairing the paint in the Senate chambers. Other priorities are to recreate the stained glass skylight in the Senate, revise the room layout and work on the stained glass and the skylight in the Old Law Library, and general remodeling and stained glass repair to make non-historic rooms compatible with historic spaces.

#### **Americans With Disabilities Act Transition Plan**

Compliance with federal statute dictated that the Capitol be surveyed for handicap access. An implementation plan is currently in place to ensure access to persons with disabilities, but additional modifications are necessary. These building modifications also have fire/life/safety implications.

#### **Space Allocation**

Many of the physical problems in the Capitol are the result of over utilization of available space. Any project to renovate the Capitol will need to address this issue.

#### **Fire and Safety Concerns**

The area of fire/life/safety will require additional consideration in any final recommendation. Seismic studies need to be completed, and fire alarm and security systems in the building are inadequate. This project modifies building elevators to meet fire code, installs smoke detection and alarms, adds a basement sprinkling system, and installs a keypad entry security system.

#### **Conclusion**

The Montana State Capitol is a monument to the people of Montana and their heritage. In order to preserve the facility for future generations, and to sustain the tradition of maintaining the building as a working, vibrant center of government, it is imperative to invest in its renovation and preservation. In recommending this course, it will be necessary to balance the *need* for infrastructure repair with the *desire* for historic renovation; and to balance expenditure of public funds for the Capitol with the needs of other government programs for funding.

A series of fortunate events have coincided to increase the possibility that a Capitol Restoration Project is feasible. The Department of Administration has already commissioned and prepared an exhaustive list of studies and surveys of the building. The appointment of the Capitol Restoration Commission has put in place an advocacy group which can serve as an umbrella organization to package the infrastructure and restoration needs of the building and to inform their fellow Montanans of the need for and importance of such an effort.

The Department of Administration will integrate as many of these projects into the initial phases of construction as are possible in preparation for a celebration of the 100th anniversary of the Capitol dedication.

Please contact Debra Fulton (444-3060) from Department of Administration for further information. ■



## SummitNet

### SummitNet Grows

The SummitNet network expansion project is well underway. The circuits and routers for Helena, Bozeman, Billings and Missoula that make up the core of the network are now installed (see the April issue of *ISD News & Views*).

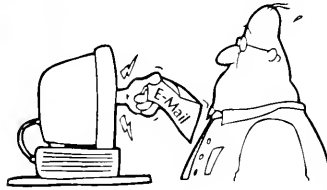
As of this writing, 63 state government sites have been converted to SummitNet. These sites represent Department of Transportation, Job Service, Corrections and Public Health and Human Services offices. This initial phase has concentrated on sites with an immediate need for higher bandwidth. The increased throughput is receiving favorable reviews.

Also in May, work continued in the Bozeman/Livingston area to install eight more sites. Additional sites were being installed in Kalispell and Libby.

In the city of Billings, ISD has developed an integrated network that provides SummitNet service to both city and state offices through a single backbone.

For general information on SummitNet, contact Wendy Wheeler (444-2856) from Customer Relations. ■

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## Announcing Portable ZIP!Office

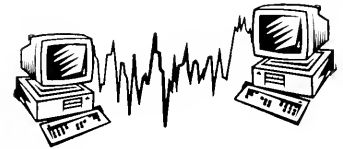
After several months in a pilot project status, Portable ZIP!Office will be moved to a production system beginning June 1, 1996. Portable ZIP!Office provides asynchronous dial-in capability for ZIP!Office users so they can check their e-mail off-site. Portable ZIP!Office is only available to ZIP!Office users that are on the Capitol Complex Backbone or remote users enrolled on a ZIP! Server on the backbone. The requirements for Portable ZIP!Office include a Windows capable PC, Portable ZIP!Office software and a modem.

Part of the pilot phase included developing a cost recovery model to assess the hardware/software and personnel support requirements. It was determined that a \$5.00/month per user fee will be charged for every Portable ZIP!Office user. The number of Portable ZIP!Office users each agency has installed needs to be included in the *Data Network Device and License Reporting* form submitted to ISD. Portable ZIP!Office charges will be included in the June billing cycle and will be reflected on your July bill.

Portable ZIP!Office has several potential uses such as providing e-mail functionality for people working at home during off hours, or providing access to your e-mail while you're traveling or at a conference out of state. Also, it may be used as an asynchronous e-mail solution for agencies that have mobile users or don't have LANs in every office. Portable ZIP!Office will allow the mobile non-LAN users to dial into

Helena for e-mail services provided they are enrolled on a backbone ZIP! Server.

If you have any questions regarding Portable ZIP!Office, please call Kyle Wynn (444-2859) of End Users Systems Support. ■



## Disaster Recovery Rehearsal Was a Success

ISD's 1996 Disaster Recovery Rehearsal was held on May 3-5. The purpose of this annual disaster recovery drill was to test the State of Montana's ability to recover critical state agency information processing systems. This was the fourth disaster recovery drill that has been conducted since 1992. This most recent rehearsal focused on the following disaster recovery elements:

- **Department of Administration System A (ES9000-821) Recovery.** Donna Cain of ISD led the Weyerhaeuser "site team" responsible for recovering System A. These tests included the restoration of MVS, CICS, DASD, IDMS/VSAM databases, NCP, VTAM, connectivity, etc. Tests were also included for a remote system console, a remote system IPL, and remote laser printing. A TI line between the Weyerhaeuser recovery center in Federal Way,

Washington and Rooms 13 A/B in the Mitchell Building (Helena) was established to allow application and network testing.

Donna and her Weyerhaeuser site team (Bill Ammann, Tom Buchholz, and Frances Greene from ISD; and Pat Jorgensen and Mike Johnson from Weyerhaeuser) were able to successfully recover all elements of Department of Administration's (DOA) System A including operating system software, telecommunications system software, application systems, and application system data. The remote console, remote IPL, and remote laser printing capabilities were also successfully tested.

- **Department of Corrections AS400 Recovery.** Mary Letang of the Department of Corrections (DOC) was responsible for the recovery of DOC's AS/400 and critical application systems. Mary worked with Bob McKelvey and Mike Johnson of Weyerhaeuser to successfully recover both DOC's AS/400 platform and all key DOC application systems. DOC application testing was conducted from the Weyerhaeuser recovery center.
- **Application Level-2 Recovery of DOA Payroll and SBAS Systems.** This testing was conducted from the State of Montana's "command center" in Helena. Jim Sheehy, Burwell Gooch, and Rick Oie from ISD, and Don Nance from the Accounting and Management Support Division conducted these application tests. Both the Payroll and SBAS application systems were successfully recovered at the Weyerhaeuser recovery center. The ISD recovery team was also able to show the DOA customers the specific data losses that can occur with the existing backup and recovery procedures. This information will allow our DOA payroll and accounting customers

to determine if the existing data recovery procedures are adequate for their disaster recovery needs.

- **Application Level-1 Recovery of ISD Telex and Billing Systems.** This testing was conducted from the State of Montana's "command center" in Helena. Brett McAlister of ISD conducted these application tests and verified their recovery at the Weyerhaeuser recovery center.
- **Application Level-1 Recovery of DPHHS SEARCHS System.** This testing was conducted from the State of Montana's "command center" in Helena. The Department of Public Health and Human

*"...as a follow-up to this year's drill, DOA/ISD staff will begin working with all state agencies to develop agency business continuity plans. The focus of these plans will be the recovery of all agency infrastructure necessary to restore critical agency business functions. In addition, ISD disaster recovery staff will define the scope of recovery tests for the next 3-5 disaster recovery drills to help facilitate the timely testing of our ability to recover the State of Montana's information technology infrastructure."*

Services (DPHHS) disaster recovery team was led by Marilyn Carlin. Other DPHHS team members included JoAnn Luck, Jack Lowney, Cindy Dean, and Jean Truyster. Cindy Dean and Jean Truyster were responsible for verifying the successful recovery of the SEARCHS application system. The SEARCHS application system was successfully recovered at the Weyerhaeuser recovery center.

- **Application Level-1 Recovery of DOJ's Title and Registration and Driver Control Systems.** This testing was conducted from the Department of Justice (DOJ) office

in Helena and the Deer Lodge Motor Vehicle Office. Karen Nelson led the DOJ recovery team. Mary Simms of Missoula and Susan Roberts of Deer Lodge verified the successful recovery of both of DOJ's application systems.

- **Network Testing.** This testing included the "switched 56" link, the PIXNET channel extender, and the DOJ link to the Deer Lodge Motor Vehicle Office. These network links were established and tested by ISD's Ron Dobmeier and his network staff (Ric Dooley, Dave Frankl, Mike McCracken, Dennis Sheline, and Charley Vandervoort).
- **Network Testing of (NCP11)** The purpose of this test was to verify our ability to "swing" NCP11 from ISD's System A mainframe to point directly to the Weyerhaeuser recovery center. This capability is critical to our ability to recover the state's telecommunications network in the event that ISD's mainframe and telecommunications center are incapacitated. This testing was done from the State of Montana's "command center" in Helena and the Deer Lodge Motor Vehicle Office. This network test was conducted by Karen Nelson of DOJ and Mike McCracken and Dennis Sheline of ISD. NCP11 was successfully switched and reswitched.
- **Network Testing of (NCP9).** This testing was done from the State of Montana's "command center" in Helena and Missoula. Its purpose was to test our ability to redirect a portion of our telecommunications network (NCP9) from the ISD network center to another local "communications center" in Helena (which in turn was directly connected to the Weyerhaeuser recovery center). ISD's Mike McCracken, Ric Dooley, and Dennis Sheline were responsible for testing the "swinging" of this

part of the network.

This testing required de-activating a portion of the production network for a two hour period while we attempted to establish the link between Missoula and the Weyerhaeuser recovery center. We were only partially successful in establishing this communications link. Due to the two hour time limit that we had established for deactivating a portion of our production network and several connectivity problems that were encountered in establishing the link, we were only able to establish a portion of this network connection. We plan on re-doing this test later this summer.

A final "post drill report" and associated action plan will be developed to document drill successes and failures and to provide a vehicle for correcting disaster recovery shortcomings identified during the drill. In addition, as a follow-up to this year's drill, DOA/ISD staff will begin working with all state agencies to develop agency business continuity plans. The focus of these plans will be the recovery of all agency infrastructure necessary to restore critical agency business functions. In addition, ISD disaster recovery staff will define the scope of recovery tests for the next 3-5 disaster recovery drills to help facilitate the timely testing of our ability to recover the State of Montana's information technology infrastructure.

Our next disaster recovery drill is tentatively scheduled for the Fall of 1996 or the Spring of 1997. The Department of Corrections has already indicated a desire to further test their AS/400 recovery capabilities in the Fall of 1996. Agencies that are interested in participating in this next disaster recovery drill should contact Bob Cummings (444-2469) from Computing Policy & Development to discuss their disaster recovery needs and plans. ■

## SNEAK PREVIEW

### WordPerfect 7.0

## ISD Evaluates Corel's WordPerfect 7.0

Corel Corporation has announced the availability of a Beta3 version of its 32-Bit Corel WordPerfect 7.0 for Windows® 95. The "gold" code is scheduled to begin shipping in the second week of June. ISD is in the process of acquiring a copy of the beta version of the product, and will begin testing and evaluating the product in the coming weeks.

Corel has stated in their release literature that the new 32-bit WordPerfect includes the following powerful and easy to use features:

- fast text indexing and retrieval
- graphics editing
- Make It Fit Expert (allows automatic shortening and lengthening of documents)
- new linguistic technology (ability to rewrite grammatically incorrect sentences)
- better performance and system resource handling
- all-new 32-bit application allowing true multi-tasking
- long file name support (up to 256 characters)
- OLE2/OLE support
- ability to convert Corel's WordPerfect 7.0 documents to HTML format and visa versa
- ability to create Web pages directly from Corel WordPerfect 7.0

As ISD begins the testing and evaluation of WordPerfect 7.0, future *ISD News & Views* articles will discuss the new product features and will include our initial experiences with the product's performance, hardware requirements, and usability—so stayed tuned.

If you have any questions concerning WordPerfect 7.0 please call Kyle Wynn (444-2859) of End User Systems Support. ■



## Job Scheduler Available Now

ISD has recently purchased an automated scheduling and restart package for the mainframe. With the acquisition and installation of CONTROL-M and CONTROL-R from New Dimension Software we have available to you the ability to set up and administer your mainframe batch processing. Currently, these applications are up and running and we are testing our own in-house batch work in an automated job scheduling environment.

The applications will be made available to our customers beginning with training to be held in June, July and possibly August. The training periods are 2½ days long, and there will be four sessions each in June and July.

As soon as personnel from an agency are trained, they will have full capability to establish and control their own production job schedule. Agencies will be able to streamline the job flow of their batch processing. The scheduler package has the ability to submit or activate successor jobs based upon successful completion of a job step or the creation and availability of a data set, rather than waiting for the end of job.

Rerun and restart of jobs can be automated to include such things as roll back and restoring data sets, restarting in specific job steps, or the option to be manually controlled.

Upon entering a training course, agencies will be provided with a few basic standards to follow and will be given authorized access to the software. All access to schedules and the affected JCL is controlled by ACF2. All access and activity is logged.

In the event that multiple agencies have input to another agency's batch processing, there is a notification process that can be implemented allowing one application to notify the other upon job completion or data set creation.

Jobs can be scheduled to run daily, weekly, monthly, yearly, intermittently, on specific days of the week or month, in specific months, at specific times, weekdays, workdays, or just about any imaginable circumstance. At a glance, you can determine the flow of your production schedule graphically. There are utilities available within the schedule to assist you.

From our review of the products to this point, they have proven to be easy to use and understand, yet very powerful tools for the control of batch processing.

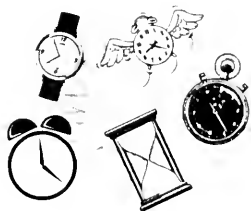
Training classes are being held:

June 3-5  
June 5-7  
June 10-12  
June 12-14  
July 15-17  
July 17-19  
July 22-24  
July 24-26

Classes are 2½ days long. Classes that begin on Monday will begin at 8:30 am, and will end at noon on Wednesday. Classes that begin on Wednesday will begin at 1:00 pm, and will end on Friday at 4:30 pm.

Reservations are being accepted on a first come/first served basis, with class size limited to ten individuals. To register, individuals must provide their name, agency, and TSO logon ID. Requests for class training should be made by phone or ZIP! to Mike Krings (444-1815). If you send your request by ZIP!, please provide your phone extension in the event your requested class time is unavailable.

Please feel free to contact Mike Krings (444-1815) from Production Services with any questions, assistance needed with Scheduler, or to schedule training.



## When Is 24 Hours Really Not 24 Hours?

When is 24 hours a day, seven days a week, really not 24 hours a day seven days a week? When talking about availability of the mainframe computer system and the data files stored there, the answer is only part of the time most of the time, and never all of the time. This response implies that someone or something can and does cause or require an interruption in service.

In today's environment of online systems, IVRs, Kiosks, and ATMs, we as a society have become accustomed to instant everything, anytime we want it. We not only want instant everything, we want those who look to us as service providers to have the understanding that we provide the best service available anywhere. This is

true of state government in service areas such as network services, computer services, LANs, and unemployment benefits to name just a few.

To accommodate this demand at the state's central data center, we staff around the clock. We have an uninterruptible power system (UPS) to buffer and reduce the outages due to power loss or fluctuation. We install multiple chiller systems, and contract vendor maintenance around the clock to ensure adequate cooling for the computer equipment and environment. Whenever possible, we test all new system and application software on a test partition of the mainframe processor. Even with these things in place, we find times when the system is not available. Why?

The answer is complex, but can be simplified to the fact that, to have an uninterrupted 24 hour system you need two of everything, and three of most things. Even if we operated under such ideal conditions, we would experience an occasional outage. In reality, we do not always have even one of what we need, and in only one case do we have two of anything required to keep us running.

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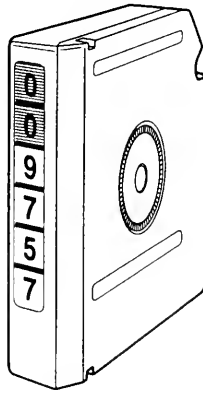
To this is added the requirement of providing production recovery backup and disaster recovery backup. Production recovery is a little simpler to deal with because, in general, there is only a single application or entity to be concerned with and, as a result,

there is some flexibility in the timing of the recovery backup. However, disaster recovery, because of the tremendous cross agency and cross application ties, is tied to a specific non-changing window. To provide this backup, we "take a picture" of the entire 320+ gigabytes of data stored on system Direct Access Storage Devices (DASD) using the Fast Dump Restore (FDR) utility. During the time this backup is being performed, from 3½ to 5½ hours, the data files being backed up are unavailable to be updated. (The time required for the backup varies because we sometimes run a single backup where only one copy of the data is created. However, whenever possible, we run a double backup where two copies of the data are created. One copy is sent to the off-site vault to be used in the case of a disaster which disables the data center. The other copy is retained on site and is used for production recovery problems such as hardware failures, overwritten data sets, and to restore data sets which were mistakenly deleted, etc.)

Let's not forget that hardware and software maintenance performed on the system sometimes requires that the system be down. This has vastly improved since the "good old days". Much of the maintenance required in today's computer world is performed with no service interruption whatsoever. When down time is required for maintenance, that maintenance is nearly always scheduled for a weekend—usually Sunday morning.

So, if you provide services to the public or to other agencies via the mainframe, keep the above factors in mind when you advertise those services. Temper the 24 hour availability. Remember, it's only available "most of the time all of the time, and never all of the time anytime."

Please feel free to contact Mike Krings (444-1815) from Production Services with any questions or assistance. ■



## Cartridge Data Set Archival Policy Is Revised

As of April 1, 1994, ISD established a policy for the automatic archival of cartridge data sets. This policy states that any data set which has not been accessed for at least 2 years and 3 months (27 months) will be archived at ISD's discretion. The goals of this policy are 1) to more effectively manage our cartridge resources and 2) to keep an adequate scratch cartridge pool.

With year end processing quickly approaching we find ourselves with fewer scratch cartridges than we would like to have in reserve at this busy time of year. Therefore, in order to relieve this deficit we have modified this policy. We will now archive those cartridge data sets which have not been accessed for at least 18 months.

If you have any questions about this policy, or about tape storage in general, please call Diane Haun (444-3336) from Security, Methods & Media Management. ■



## Executive Planning Process (EPP) Discussions Dominate Meeting

In the May meeting of the Information Technology Advisory Council (ITAC), focus was directed toward the EPP policies and proposals.

ITAC adopted the recommendations for the minimum level of technology, which were recently modified to identify that the state should implement an enterprise-wide plan to upgrade PCs below the minimal level of technology via a single EPP item.

New proposals for EPP items as identified by the balloting conducted by the Information Services Division include the following:

- Enterprise E-Mail
- Enterprise Database Support
- Agency Oracle Programming Support
- Enterprise Hardware/Software Management
- Internet Services
- Enterprise Electronic Commerce
- Enterprise Document Management
- Enterprise Data Collection Technologies
- Statewide GIS Cadastral Database
- Public Safety Radio: Phase I Implementation
- Statewide GIS Metadata Coordinator & Tech Support
- Statewide GIS Coordinator & Tech Support Position

After much discussion, ITAC members



voted to go forward to the legislature with ALL of the proposed EPP items. Final balloted results can be obtained by contacting Amanda Christen (444-3080) from Customer Relations.

The next ITAC meeting will be held on July 9, 1996 in Room 111 of the Metcalf Building from 8:30 a.m. until 11:30 a.m. Agenda items include discussion of the mainframe rate unbundling, the major categories of cost recovery, and the options available to determine rates for FY98-99. These rates will be finalized at the following ITAC meeting, slated for September 10, 1996.

Complete minutes of the meeting are available on the Value Added Server (GUEST/ITACINFO), the State Bulletin Board System (Agency / Administration / Information Services / Files / Advisory Groups) or by calling ISD (444-2700). ■



## Operating Systems Subcommittee Submits Recommendations

In the May meeting of the Information Technology Managers Group (ITMG), Subcommittee Chair Hank Trenk presented recommendations from the Operating Systems Subcommittee. The recommendation regarding the Desktop Operating Systems is as follows:

*The State is at the end of the life cycle of its current Desktop Operating System environment (DOS & Windows 3.x). The State needs to plan and budget for a new Desktop Operating System for the next Biennium (FY98-99).*

A similar recommendation was previously taken to the Information Technology Advisory Council (ITAC), who suggested language modifications, which led to the current recommendation. The new recommendation was adopted by ITMG and will be presented to ITAC in their May meeting for final approval.

The subcommittee is still struggling with the selection of an E-mail product, and meets every two weeks to discuss various related issues, including infrastructure, features and functions, and the E-mail clients to be supported by the Information Services Division of the Department of Administration.

**"The recommendation regarding the Desktop Operating Systems is as follows:**

*'The State is at the end of the life cycle of its current Desktop Operating System environment (DOS & Windows 3.x). The State needs to plan and budget for a new Desktop Operating System for the next Biennium (FY98-99).'*"

If you wish to attend meetings or want more information, contact Hank Trenk (444-3064) from the Legislative Council or Amanda Christen (444-3080) from Customer Relations.

Complete minutes of the meeting are available on the Value Added Server (GUEST/ITMGINFO), the State Bulletin Board System (Agency / Administration / Information Services / Files / Advisory Groups) or by calling ISD (444-2700). ■



## Calling All WordPerfect 5.1 Users!

Many WordPerfect users have been struggling with their office's use of a wide variety of WordPerfect versions. Problems associated with such a combination include "round-tripping," (for a discussion of "round-tripping", see the article entitled "Round-Tripping in WordPerfect 6.1 for Windows" in the May issue of ISD News & Views) and the inability of WordPerfect 5.1 to recognize 6.0 or 6.1 files. However, many users do not need fancy formatting techniques. Nor do they require the ability to embed objects or graphics. They might even have a few hundred macros or templates where rewrites would be a nightmare to even consider. Lastly, even if none of the above items were true, tight budgets often do not allow for an upgrade to WordPerfect 6.1 (with or without the supporting hardware). Well, I think we might have a solution for you.

As you may all ready know, an upgrade to WordPerfect 5.1+ will give you the capability of retrieving 6.0 documents. But, were you aware that there is a new patch (beta version) called "61to51" which provides the capability for WordPerfect 5.1+ users to recognize 6.1 files too? In addition, this patch will help eliminate round-tripping and still keep upgrade costs to a minimal fee.

For an upgrade to WordPerfect 5.1+ (license only), the cost is

approximately \$44.20 per user and can be obtained from Department of Administration's Central Stores by calling Jim Nelson (444-4514). For complete documentation, license, and supporting materials, outside vendors such as Data Cal, will ship WordPerfect 5.1+ for approximately \$49.95 per user. Best of all, the "61to51" patch is available at no charge. You may download the file from the Corel USA Support BBS (801/225-4414) for 9600 baud modems or (801/225-4444) for high speed 28,800 baud or faster modems, or you may contact Leslie Cummings (444-2921) from End User Systems Support for a copy. If you chose to download the file, you must copy 61to51.exe into your WP51 directory, decompress the file by typing 61to51 at the DOS prompt and following the instructions. Then you must reboot your workstation. Good luck and happy word processing!

If you have any questions concerning WordPerfect 5.1+, call Leslie Cummings (444-2921) from End User Systems Support. ■



## ZIP! Administration Utilities on the VAS

When troubleshooting ZIP!Mail or ZIP!Office, you may need a utility or a file immediately and can't wait for a returned phone call. Or, your ZIP! is down and obviously, no one can send you the necessary files needed to get the repair work done. ISD's Value Added Server (DOA\_VAS\_001)

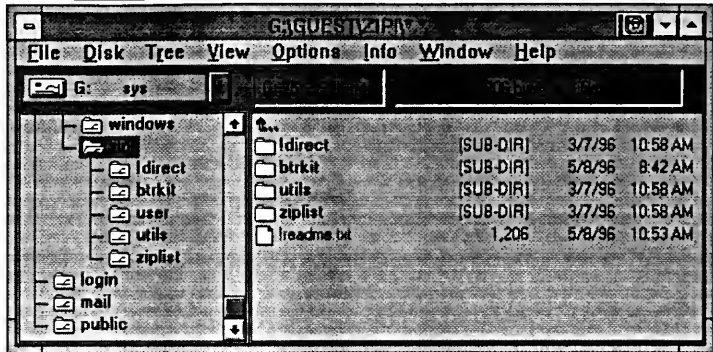


Figure 1: ZIP! Subdirectory on the Value Added Server

comes to the rescue!!! There is a wealth of information and services put on this server for State agencies who have access to the Novell backbone.

A ZIP! subdirectory was created on the VAS especially for E-Mail administrators. (See Figure 1.)

At the DOS prompt, or using NWUSER, login to DOA\_VAS\_001. Map a drive to DOA\_VAS\_001\SYS:. (For further information on logging onto the VAS, check with your Network Administrator). Go to the \GUEST\ZIP! subdirectory and you will see many files needed to perform maintenance on your ZIP! System.

### \ZIP!\DIRECT\

addrbook.\$ *compressed version for Portable ZIP! users*  
*Note: requires LOADADBK.BAT to decompress, LOADADBK.BAT is located in \ZIP!\APNCODE on your Portable ZIP! PC*

apudir2.btr *the current ZIP! Address Book*  
 apudir2.old *last week's Address Book*  
 apudir2.new *the forthcoming ZIP! Address Book*  
 apudir2.zip *compressed version of apudir2.btr*  
 apudir2.exe *self-extracting executable version of apudir2.btr*

### \ZIP!\UTILS\BINDID\

bindid.exe *displays the Novell object id from the user id (keys on the EMBASE DOS environmental variable), extremely helpful utility when you need to match an ACF2 ID to a mailbox directory*

### \ZIP!\UTILS\BREBUILD\

*contains a series of btrieve utilities for managing and rebuilding btrieve (\*.btr) files (i.e., cal.btr, intray.btr, etc.)*

### \ZIP!\BTRKIT\

btrkit.exe *a self-extracting executable that contains sub-directories and any empty btrieve (\*.btr) file that is needed for ZIP!Mail/ZIP!Office*

### \ZIP!\ZIPLIST\

ziplist.txt *the ASCII text version of the ZIP! Address Book, this file is needed to perform a manual Merge/Install*

Figure 2: ZIP! Subdirectory Structure and Description of Files

The "readme.txt" file lists all files located in the ZIP! subdirectory structure and explains their purpose as shown in Figure 2.

If you have any questions on the ZIP! maintenance files on the Value Added Server (VAS), please call Sue Skuletich (444-1392) of End User Systems Support. ☐



## State BBS Coming Attractions New Version of Upload Under Development

A new State Bulletin Board System (BBS) version of UPLOAD is being tested for release. Here are a few brief details about the impressive improvements.

**Description Wrap Format:** The text will automatically wrap as you type in the description.

**Batch Upload:** Immediately after a successful upload, the SYSOP is given an opportunity to perform another upload. The last directory specified as

*"This upload version will be available for use by SYSOPs on the backbone sometime this summer. If you are not sure whether you are on a backbone network connection, talk to your LAN Administrator."*

*SYSOPs will be notified when the new UPLOAD.EXE is available and how it can be obtained at an upcoming BBS SYSOP gathering."*

well as the descriptive text is retained as a default value.

**File Area Selection:** The current version of upload asks you to enter a FILE AREA #. If you do not remember the number of the file area you must type in numbers on a trial and error basis until the target area is determined. In the improved version the entire FILE CATEGORY list is displayed on the screen for your choice.

**Addition of Adobe Acrobat File Format:** This will allow fully formatted, electronic documents described in Portable Document Format (PDF) to be uploaded for distribution. Converting to a PDF format preserves the appearance of a document or form. Once the file has been distributed, a free downloadable Adobe Acrobat reader allows an end user to read or print it in its original format regardless of the computer platform.

One serendipitous benefit of the new upload is description text does not have to be retyped if you try to upload a file that cannot be found or that has an unsupported extension.

This upload version will be available for use by SYSOPs on the backbone sometime this summer. If you are not sure whether you are on a backbone network connection, talk to your LAN Administrator. If you have no LAN Administrator, call End User Systems Support and we can help you determine if you are a backbone user.

SYSOPs will be notified when the new UPLOAD.EXE is available and how it can be obtained at an upcoming BBS SYSOP gathering. Details on the gathering will be forthcoming.

If you have questions concerning the BBS or SYSOP functions please call Candace Hastings (444-2858) from End User Systems Support. ☐

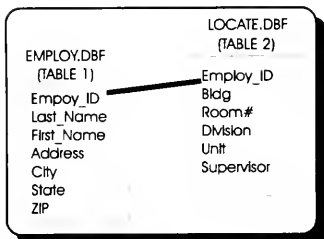


## Designing Databases in Approach 3.0 An Introduction to Database Theory

Relational database theory relies on the concept of multiple tables joined together on a field common to both tables. Ideally this joined field contains unique values for each record. This is known as a one-to-one join. A value in a field in Table One corresponds with the same value in Table Two. You can also have a one-to-many correspondence where one value in a table field could correspond with many values on another table. Least desirable is a many-to-many join. When a join between two tables is created it allows all of the fields from either of the tables to be used in forms, reports and views while maintaining the non-duplication of data.

Approach uses a single application (.APR) file and multiple data (.DBF) files. Each of the .DBF files is the equivalent of a separate table. When you join tables in Approach, you create joins between the individual .DBF files. .DBF files created with another Approach application can be used in a join but you must remember that both applications can update your data. In some cases this could be desirable—in others, your entry validation would be compromised. Entry validation is where the entry into a record in a certain field is checked for validity for both content and exceptions to programmer created rules.

When you create views or reports within your applications, you choose your fields from either your primary database .DBF file or other fields which are available through joins.



**Figure 3: Relational Database Example**

In the example in Figure 3, the EMPLOY.DBF\Table 1 is joined to the LOCATE.DBF\Table 2. The field Employ\_ID on the EMPLOY.DBF corresponds with the Employ\_ID field on the LOCATE.DBF file. The join then allows the fields from LOCATE.DBF to be used in reports using the EMPLOY.DBF. The unique identifier is the field Employ\_ID. This identifier corresponds with the same value in LOCATE.DBF tying the two separate tables\ .DBF files together.

EMPLOY.Last\_Name would point to the data contained in the EMPLOY.DBF file. LOCATE.Supervisor would point to the data contained in the LOCATE.DBF file. This way you could create a report or form based upon Supervisor with all the employees he or she supervises.

Realizing that this can be a difficult concept to grasp, remember the following points: .DBF files in Approach are equivalent to a table, Approach uses a single .APR application file with single or multiple joined .DBF files, and allowing more than one Approach application to use the same .DBF files can compromise your validation rules.

As always, if you have any questions regarding Lotus 1-2-3, Freelance, or Approach contact Brian Divine (444-

2791) from End User Systems Support. ☐



## Extruded Edges Cut More Than Cookies

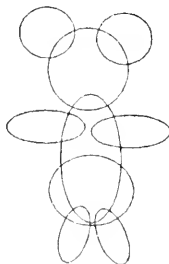


**Figure 4**

cookie cutter in Figure 4, in almost no time at all. Here's how.

Create the shape you want out of any combination of ellipses and rectangles. Weld the shapes together (or use node edit if you wish) to create a single solid object.

Select the new object and click on the **Extrude** command in the **Effects**



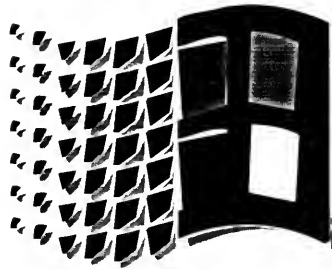
**Figure 5**

You can use the **Extrusion** command in **CorelDRAW!** for a lot more than creating 3D objects. **Extrude** can be used to create complex outlines like the

menu. Set the handle (X) at a vanishing point that creates the visual effect you wish and set the depth of the extrusion to a small percentage of absolute (in this case 6). With the entire extruded object selected choose **Separate** from the **Arrange** menu. You may have to separate the object more than once. After separation, you can move the inside object leaving only an extruded outline. This outline can be selected as a group object and colored and shaded just like any other object in **CorelDRAW!**.

Stay tuned in next month... Same COREL Channel... Same COREL time... For more exciting COREL Graphics news.

For more information about COREL, contact Jerry Kozak (444-2907) from End User Systems Support. ☐



## WINDOWS FREEBIES!

**WSearch**  
Copyright © 1995 Ziff Davis Publishing Company

Another free Windows utility, courtesy of *PC Magazine*, is **WSearch**. **WSearch** is a Windows text search utility with regular expression support, including the unique ability to use regular expressions in filenames. Following are excerpts from the **WSearch** readme file.

To install WSearch in Windows 3.1, from Program Manager create a new program item from the **File, New** menu. Set the command line to `c:\path\WSWIN.EXE`, where "`c:\path`" is the directory where you installed WSearch on your system. Set the working directory to any directory you want. In order for WSearch to work properly under Windows 3.x, you must also install 3D control support, contained in the file CTL3DV2.DLL. In most cases you will find that this DLL is already installed on your system because many applications use it. Use the following instructions to check for 3D control support on your system, and install it if necessary.

If you are running Windows 3.x, open a File Manager or MS-DOS window and check the date and time on the file CTL3DV2.DLX which came with WSearch. Then check your \WINDOWS and \WINDOWS\SYSTEM directories for the file CTL3DV2.DLL (note the difference in extension). Compare the ages of the two files and take one of the following steps:

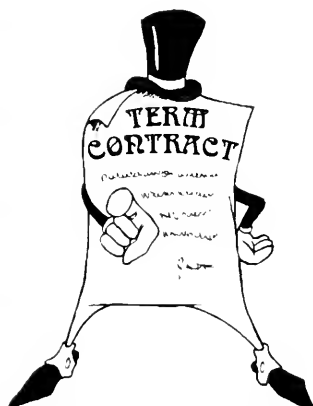
- (a) If CTL3DV2 exists in \WINDOWS or \WINDOWS\SYSTEM, and the copy there is NEWER than the file which came with WSearch, no further action is necessary.
- (b) If CTL3DV2 does not exist in \WINDOWS or \WINDOWS\SYSTEM, or the copy there is OLDER than the file which came with WSearch, delete any existing CTL3DV2.DLL file from \WINDOWS or \WINDOWS\SYSTEM, copy the CTL3DV2.DLX file from the WSearch directory to the \WINDOWS\SYSTEM directory, and rename it to CTL3DV2.DLL.

Once these steps are completed you can delete CTL3DV2.DLX from the WSearch directory if you wish.

For complete details on the Windows version, start it up and look through

the help file. Run the file WSWIN.EXE if you are under Windows 3.x. You can also start Windows Help (WINHELP.EXE) and open WSEARCH.HLP.

If you would like a copy of WSearch, the necessary files are available on the ISD Value Added Server under \GUEST\WINDOWS\WINADDON\WSEARCH. You can also contact Denny Knapp (via ZIP!, at 444-2072, or via the Internet at [dknapp@mt.gov](mailto:dknapp@mt.gov)) of End User Systems Support. ☐



## Term Contract Status

### Payments to ComputerLand

Remember: Any payments that your agency is making for IBM equipment should be sent to Attn: Mike Price, ComputerLand of Helena, 830 Front Street, Helena, MT 59601—the vendor for the IBM term contract. Payments for HP equipment should be sent to Attn: Curtis Jacobson, ComputerLand of Western Montana, 800 Kensington Ave, Missoula, MT 59801—the vendor for the HP term contract.

## Dell Computer

### Price Drops!

Dell Computer dramatically reduced prices on notebooks, desktops and servers on April 29! Poweredge server prices were reduced up to 33%. Affecting these price drops were memory, hard drive, CPU and tape back-up reductions. Overall price drops throughout the product line averaged 26%. Dell's build-to-order model allows them to pass through price reductions very quickly.

Latitude 120MHz notebooks now start at \$2395 (retail), which includes 8MB RAM and a 540MB hard drive with your choice of Windows, and a one year on-site warranty.

### New Products!

Dell announced two new notebooks during the month of April. These products are an extension of the current Latitude XPi line offering both 100MHz and 133MHz Pentium processors. Dell's announcement included new video adapters from NeoMagic to give the systems fast, crisp displays. Screens are larger, sound is included, and the trackball is now optical rather than mechanical.

In addition, the Latitude XPi, for the second year has won the *PC Computing* magazine "Notebook Hell" Editors Choice Award. Dell surpassed all other contenders in the shaking, dropping, baking and cooling tests devised by *PC Computing*.

### Dell Dimension XPS—New and Improved!

The Dell Dimension XPS line now employs new technologies and components that will become hallmarks of the next generation of performance PCs. These technologies are:

- Intel 430vx Chipset
- Synchronous Dynamic RAM
- Dual-inline Memory Module Design
- 3.3 Volt Technology
- Integrated Sound Blaster Compatible Sound

- Imagine II High End Video
- Advanced Power Management

The Dimension XPS line includes a three year limited warranty.

### ***Dell Optiplex GX PRO announced May 1!***

The new Dell Optiplex GX PRO is now available in single or dual pentium pro configurations. Processor speed choices are 180MHz or 200MHz. Other hot features include:

- 16KB Processor Integrated Primary Cache
- 256KB Processor Integrated Secondary Cache
- 16MB EDO EDD DIMM Standard
- PCI, ISA, PCMCIA
- Vibra 16 Sound, Microphone, Stereo In and Out
- 2MB Flash Memory for BIOS, Setup, Plug and Play

Any Questions? Contact Scott Mangum (800/274-7799 ext. 66226 or on the Internet at [scott\\_mangum@ dell.com](mailto:scott_mangum@ dell.com).)

### ***Digital/MicroAge***

If you have any questions regarding Digital PCs, need a quote or would like to see one of our new notebook computers, please call Steve Woolley at MicroAge (442-0050 or 800/290-4743).

#### ***New HiNotes***

Digital is proud to announce a new line of HiNote computers—sleek, fast, Pentium-based machines that are network-ready and powerful enough to provide desktop performance on the road. Included in the new line are the HiNote Ultra II—the industry's slimmest and lightest notebook, and the HiNote VP—a powerful machine for price/performance-conscious business users. Choose from Pentium 100MHz and 133MHz processors to put your customers on the high-performance fast track. The new family features enhanced capabilities such as larger hard drives, faster

Pentium processors, larger displays, enhanced video, and improved expandability. All these features are available at very competitive prices.

#### ***Creative Connectivity***

Digital has extended its networking expertise to its HiNote line by incorporating user-friendly connectivity features, Digital ClientWORKS and built-in Desktop Management Interface (DMI) support—the industry standard for managing client PCs. This combination makes it easier for network managers to deploy HiNote systems remotely or on the network. The result is more efficient use of resources, increased end-user satisfaction, and ultimately, a savings in the overall cost of PC ownership.

#### ***Thinner and Expandable***

For highly mobile professionals who demand desktop performance wherever they are, the Digital HiNote Ultra II offers the ultimate in performance and functionality. The HiNote Ultra II gives mobile professionals the thinnest, lightest full-function Pentium Notebook available, and includes external cache memory and accelerated graphics for increased system performance. All models offer a 10.4-inch SVGA active-matrix color display.

Like its HiNote Ultra predecessors, the HiNote Ultra II works with the Mobile Media Module that transforms the HiNote Ultra into a portable multimedia powerhouse. Even with the Mobile Media Module attached, the HiNote Ultra II is barely over 2" high and weighs in at just under six pounds, while providing three speaker stereo sound and a quad-speed CD-ROM drive. The HiNote Ultra II is the ultimate mobile machine for customers who need a high-powered, high-performance system to take on the road—and a machine that can tap into the network when they get back to the office.

#### ***HiNote VP: Price/Performance Leader***

The Digital HiNote VP notebooks come with a PCI bus and EDO memory for optimum performance. All HiNote VP models have a 10.4" SVGA dual-scan or active-matrix color display and accelerated graphics. The floppy disk drive is housed in an optional bay that can accommodate a number of system accessories such as optional second battery, car adapter, or the standard AC adapter which comes with each system.

#### ***HiNote: On the Road and Off***

For full network capability and a total mobile solution, Digital's new family of HiNote notebook computers can meet the most exacting needs of those who need the flexibility of going on the road and the capability of tapping into the network when they get back—all at a great price/performance point.

### ***ComputerLand of Helena***

Please call Mike Price (443-3200) with questions relating to the IBM term contract.

#### ***New: IBM ThinkPad 365E and 365ED***

Featuring the fast Pentium 100/33MHz processor (the first number is the processor speed and the second number is the speed at the CPU bus), the light-weight IBM ThinkPad 365 is a powerful tool made to take with you. If you need more advanced and integrated multimedia capability, consider the ThinkPad 365ED system solution. The integrated CD-ROM and other features make it MPC2-compliant, allowing it to compete with much heavier and less integrated multimedia systems.

A ThinkPad 365 system can be combined with the IBM ThinkPad 365 Port Replicator and Charger and become your primary personal computer, providing an alternative to a desktop system. Host connectivity is attained with PCMCIA cards.

**Features:**

- Pentium 100MHz processor
- Large memory capacity (8MB standard and upgradeable to 24MB)
- 540MB standard, optional 810MB hard drive
- Integrated 5.25-inch CD-ROM drive on the 365ED
- IBM ThinkPad 365 NiMH battery pack
- Local bus video with acceleration
- Built-in speaker
- One Infrared Transceiver
- TrackPoint III
- Full complement of ports for peripheral connections
- 16 bit Audio (365ED models)
- Non-removable 1.44MB floppy diskette drive (External FDD is standard with the ThinkPad 365ED)
- Type III PCMCIA slot
- MIDI/joystick port (365ED)
- Large 10.4-inch display
- DSTN LCD display with 256 color support with VGA resolution, 1MB video RAM can support 64K colors when displaying only on an external monitor

**New: IBM ThinkPad 760E and 760ED**

Open the cover of the new ThinkPad 760E or 760ED—see the large 12.1-inch display and the styling of the tilted keyboard with built-in palm rest—and you will realize that you are experiencing IBM's latest edition of the ThinkPad 760 family. Add to that a fast Pentium 133/66MHz or 120/60MHz processor with L2 cache (depending on model), full PCI architecture with PCMCIA CardBus PC Card support, large-capacity hard disk storage, media processor Mwave(R) Digital Signal Processor (DSP), dual Infrared (IR) transceivers, 64K color support, and highly functional ThinkPad Ultrabay(TM)—you have everything you need, and more, in a compact, light-weight notebook.

Additional available functions include the integrated media processor Mwave DSP stereo audio support, WAV and

MIDI audio support, integrated (up to 28.8 Kbps) data fax modem support, full-feature telephony support (speakerphone and telephone answering machine), and a slide volume control. Additionally, integrated IR for wireless data/file transfer is available.

Consider the ThinkPad 760ED system solution if you need more advanced and integrated multimedia capability of CD-ROM, audio, and video combined. The integrated removable 4X CD-ROM drive (150/600Kbps), Total Image Video(TM) with moving pictures experts group (MPEG-1) and (MPEG-2) half horizontal resolution (HHR) support is available in the 760ED models only. Stereo speakers, TheaterSound (MIDI Wave Table Audio), and other features make the ThinkPad 760ED MPC-2 compliant, setting it apart from less integrated multimedia competitive systems.

**Features:**

- 12.1-inch SVGA TFT display
- Pentium 133/66MHz or 120/60MHz processor with L2 cache
- RAM: 8MB or 16MB standard, maximum of 72MB or 80MB, depending on model
- PCI bus architecture with PCMCIA CardBus PC Card support
- Wide range of docking solutions including the new IBM SelectaDock solution
- All systems have simultaneous display support
- Thick base models can be upgraded with the optional CD-ROM at any time
- Keyboard with automatic tilt function and palm rest area
- High-capacity removable HDDs: 810MB, 1.08, and 1.2GB, optional second hard disk
- Media processor—programmable Mwave DSP subsystem for audio, games, music; 28.8 Kbps data fax modem; and telephony (answering machine/speakerphone)
- TheaterSound (MIDI Wave Table Audio)
- Li-Ion battery

- Built-in microphone and speakers
- Removable 1.44MB floppy diskette drive (FDD)
- Type III PCMCIA slot

The ThinkPad 760ED with MPEG and Pentium 133/66MHz has the following additional features:

- Port for the attachment of an external FDD
- MIDI joystick port
- Total Image Video with MPEG-1 and MPEG-2 HHR support
- Integrated, removable 5.0-inch CD-ROM drive (4X)

**New: IBM ThinkPad 760EL and 760ELD Systems**

Similar to the 760E and 760ED, with the following:

**Features:**

- Pentium 133/66MHz, 120/60MHz, or 100/66MHz processor depending on model
- Large 12.1-inch SVGA (800 x 600) TFT or a 11.3-inch DSTN SVGA LCD display
- Both are capable of using the CD-ROM option and the 1.2GB option
- All models are designed to be compatible with Sound Blaster Pro audio and can accept the CD-ROM option

The ThinkPad 760ELD also features an integrated, removable 5.0-inch CD-ROM drive (4X). ■





## Training Calendar

This schedule has been assembled by the Helena College of Technology of The University of Montana. If you have any questions about enrollment, please call 444-6821.

All classes will be held at the Helena College of Technology, Room 211, at 1115 N. Roberts, unless another location is specified. Please note that these costs are subject to change each July 1.

To enroll in a class, **you must send or deadhead an enrollment application** to the State Training Center, HCT, Helena, MT 59601. If you have questions about enrollment, please call 444-6821. *Once you enroll in a class, the full fee will be charged UNLESS you cancel at least three business days before the first day of class.* HCT is also willing to schedule specific classes by request from state agencies.

	<u>DATES</u>	<u>COST</u>	<u>LENGTH</u>
<b>Data Base Classes</b>			
Intro. To Oracle	June 3, 4, 5	255.00	3
Intro. To Oracle	July 1, 2, 3	255.00	3
Oracle Forms, Prereq. Intro. to Oracle	June 10, 11, 12	255.00	3
Oracle Forms, Prereq. Intro. to Oracle	July 29, 30, 31	255.00	3
Oracle End User Tools, Prereq. Intro. to Windows	June 24	85.00	1
Oracle End User Tools, Prereq. Intro. to Windows	July 9	85.00	1
Oracle Reports, Prereq. Intro. to Oracle	June 25, 26, 27	255.00	3
Oracle Reports, Prereq. Intro. to Oracle	August 27, 28, 29	255.00	3
Approach, Prereq. Intro. to Windows	June 13	85.00	1
Approach, Prereq. Intro. to Windows	July 30	85.00	1
<b>Data Network/Mainframe Classes</b>			
Customized Novell Training	August 26-30	1000.00	5
Introduction to Culprit	July 9, 10	170.00	2
Unix/AIX	August 19-23	1000.00	5
<b>Microcomputer Classes</b>			
Introduction to Windows	June 3 or 4 or 5 or 6 or 7	85.00	1
Introduction to Windows	July 8	85.00	1
ZIP!Office, Prereq. Intro to Windows	June 24 or 25 or 26 or 27	32.50	1/2
ZIP!Office, Prereq. Intro to Windows	July 22	32.50	1/2
<b>Word Processing Classes</b>			
WordPerfect 6.1 for Windows	August 19, 20	170.00	2
Prereq. Intro to Windows			
WordPerfect 6.1 Conv. Windows	June 13	85.00	1
Prereq. Intro to Windows, WordPerfect			
WordPerfect 6.1 Conv. Windows	July 15 or 16 or 17 or 18 or 19	85.00	1
Prereq. Intro to Windows			
<b>Spreadsheet Classes</b>			
Lotus for Windows	July 1, 2	170.00	2
Lotus Conversion for Windows	June 20	85.00	1
Lotus Conversion for Windows	August 1	85.00	1

*Prerequisites may be met with consent of Instructor.*

The Helena College of Technology makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in training. Persons needing an accommodation must notify the College no later than two weeks before the date of training to allow adequate time to make needed arrangements. To make your request known, call 444-6821.



## **ISD Class Enrollment Application**

COMPLETE THIS APPLICATION **IN FULL** AND RETURN  
IT **AT LEAST ONE WEEK PRIOR** TO THE FIRST DAY OF CLASS

### **COURSE DATA**

Course Requested: \_\_\_\_\_

Date Offered: \_\_\_\_\_

### **STUDENT DATA**

Name: \_\_\_\_\_

Soc. Sec. Number (for P/P/P): \_\_\_\_\_

Agency & Division: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

How have you met the required prerequisites for this course? Explain, giving the class(es) taken, tutorial(s) completed, and/or experience.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **BILLING INFORMATION/AUTHORIZATION MANDATORY**

User ID: \_\_\_\_\_

Agency #: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

**FULL CLASS FEE WILL BE BILLED TO THE REGISTRANT UNLESS  
CANCELLATION IS MADE THREE BUSINESS DAYS BEFORE  
THE START DATE OF THE CLASS.**

**DEADHEAD COMPLETED FORM TO:  
COMPUTER TRAINING CENTER  
HELENA COLLEGE OF TECHNOLOGY  
OF THE UNIVERSITY OF MONTANA  
PHONE 444-6800 FAX 444-6892**



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Information Services Division: 406/444-2700



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ISD News & Views is published monthly by the Information Services Division (ISD), Department of Administration, Room 229, Mitchell Building, Helena, MT 59620, 406/444-2700, FAX 406/444-2701.

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1050 copies of this public document were printed at a cost of \$360. Distribution costs are \$18.25. 120 copies of this document were distributed electronically at no cost.

### *Editors...*

Curt Secker (444-1614)

Internet: [csecker@mt.gov](mailto:csecker@mt.gov)

Irv Vavruska (444-6870)

Internet: [ivavruska@mt.gov](mailto:ivavruska@mt.gov)



Department of Administration  
Information Services Division  
Mitchell Building, Room 229  
P.O. Box 200113  
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